REMARKS/ARGUMENTS

Claims 1 and 3-9 are pending in this application. Claims 1, 3, 5 and 8 have been amended. Claims 1 and 3-9 remain pending for examination.

Interview

Counsel for Applicants appreciate Examiner Whipple's careful attention during interviews held on February 11 and February 13. During these interviews we discussed the cited references in regard to the recited claims. We also discussed that Garg and Lutz do not disclose selecting a measurement device from a plurality of measurement devices.

Claim Rejections under 35 U.S.C. § 112

Claims 3-5 and 8 are rejected under 35 USC § 112, 2nd paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 3-5 depend on cancelled claim 2. This informality has been corrected in the present amendments. Claim 8 has been amended to further point out the subject matter being claimed as recommend by the examiner. In light of these amendments, these rejections are moot.

Claim Rejections under 35 U.S.C. § 103

Claims 1, 3-4 and 6-7 are rejected under 35 USC 103(a) as being unpatentable over U.S. Publication No. 2003-0204579 to Lutz ("Lutz"), in view of U.S. Patent No. 6,327,677 to Garg et al. ("Garg"), and further in view of what was well known in the art. Applicants traverse.

As discussed with Examiner Whipple, Garg and Lutz singularly or in combination do not teach or suggest selecting a measurement device from a plurality of measurement devices as recited in the claims. Moreover, these references do not select a measurement device based on a measurement type received from a user request and do not select a measurement device based on path information included in a user request as recited in the claims. Hence, claims 1, 3-4 and 6-7 are not rendered obvious by Garg or Lutz.

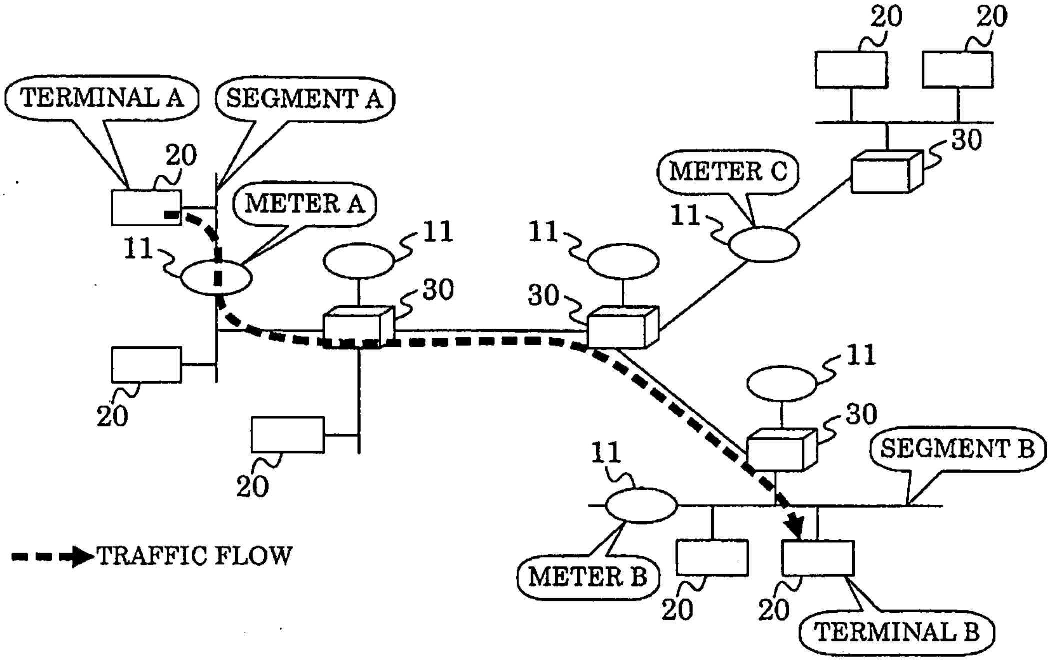
Claim 5 is rejected under 35 USC 103(a) as being unpatentable over Lutz and Garg as applied to claim 2, further in view of U.S. Patent No. 7,061,874 to Merugu et al. ("Merugu"). Claim 8 is rejected under 35 USC 103(a) as being unpatentable over Lutz and Garg as applied to claim 1, further in view of U.S. Publication No. 2003-0033395 to Sato ("Sato"). Claim 9 is rejected under 35 USC 103(a) as being unpatentable over Lutz and Garg, further in view of U.S. Patent No. 6,223,222 to Fijolek et al. ("Fijolek"). Applicants traverse.

The further cited references, Merugu, Sato and Fijolek do not singly or in combination with the other references cure the deficiencies identified in Lutz and Garg. Hence, claims 5, 8, and 9 are likewise not rendered obvious by the cited prior art.

The Problem Solved by the Claimed Invention

Moreover, the claims are directed toward an apparatus that can be used to select a measurement device or devices in a network from a number of measurement devices. Typically, making such measurements in a large-scale network would take a large amount of work. For instance, a system administrator would have to search through the network topology to find the measurement device or devices that he would like to use to make a measurement. In doing so, the network administrator would have to ensure that the measurement device would perform the proper measurements and be located in the proper path. The network administrator may also have to determine whether the measurement devices have been previously assigned to perform a measurement prior to use. The administrator may also have to determine the traffic flow before choosing a measurement device. Thus, in a large network, the burden on a network administrator can be heavy.

The following exemplifies the burden on a network administrator. In the figure shown below, if a user desires to measure the delay between Terminal A and Terminal B, it would be necessary for the user to select the proper devices to make the measurement. The user would have to find measurement devices that perform the desired measurement as well as find measurement devices in the proper path. For example, if the user selects meter A and meter C, the time delay measurement between Terminal A and Terminal B would fail. Moreover, the user would have to ensure that each of the meters perform the proper measurement and that the meters are not currently in use.



One object of the present claims is to lessen the burden on a network administrator by providing a network measurement configuration apparatus that can be used to select measurement devices that perform the proper measurements. Neither Lutz nor Garg provide an apparatus that solves this problem as claimed. The device described in Lutz requires that a user select the measurement device. Such a device would not solve the problem the invention solves. Using the device in Lutz, the user would still have to determine a number of factors prior to choosing the network device. Moreover, Garg uses a network monitor that collects information from network devices and applications, but does not select the devices from where the measurement s are received. Hence, Garg also does not solve the problem of selecting measurement device in a network.

How the Claimed Invention Solves the Problem

The above problems can be solved by the claimed invention. By collecting the latest information with respect to the network architecture and the measurement devices, the appropriate measurement device to execute a target measurement can be automatically selected by inputting the route information and the measurement type.

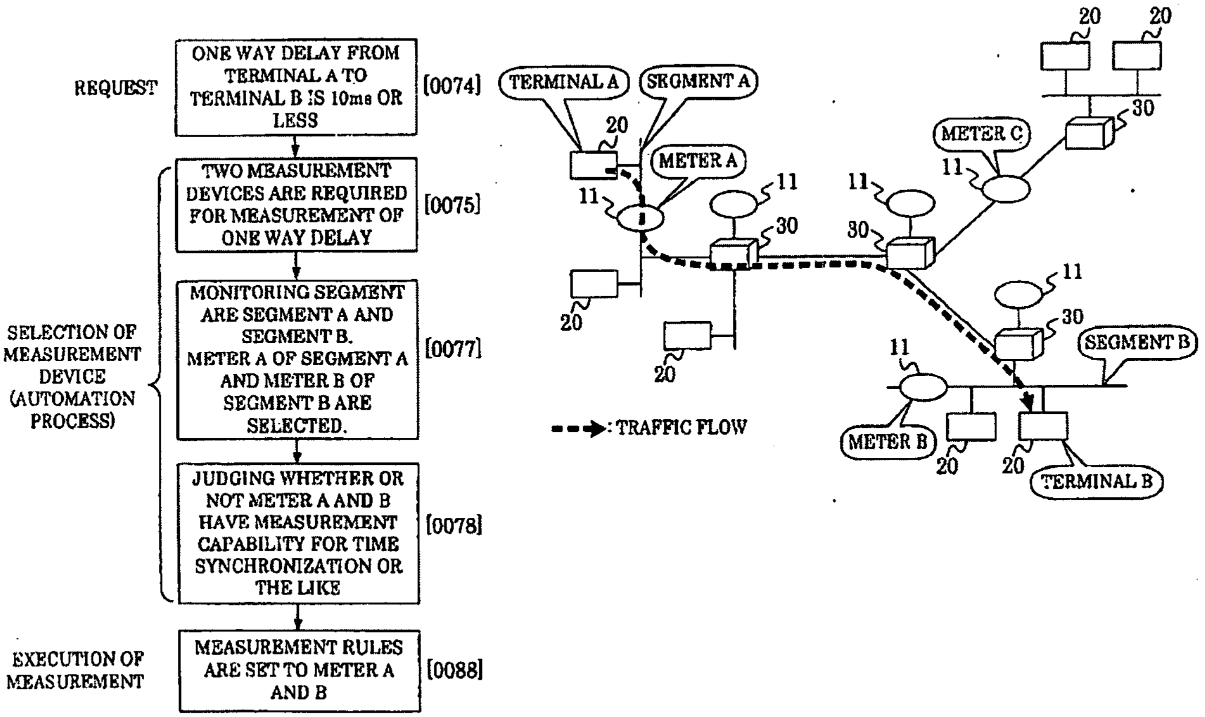
As discussed in the specification, each measurement device can provide measurements of a plurality of measurement types. A measurement characteristic database 108b can store each measurement type associating with a necessary number of meters, process to be executed by the meters, process to be executed by the server or the like (Refer to a paragraph 0052). Further, the meter information database 108c can store measurement characteristics, information of segment which can be monitored, meter state or the like as information relating to the measurement device (Refer to a paragraph 0055). The network architecture management database 108d can store information identifying a connection state of the network on a segment basis (Refer to a paragraph 0067).

During an automated process, the task distributor 15 can receive a user request and extract information (Refer to a paragraph 0074) relating to a service level from the user request (Refer to a paragraph 0036), and determines a necessary number of meters and measurement task (Refer to a paragraph 0075). The task distributor 15 can also refer to the network architecture management database 108d, determines a segment to be monitored, and selects a meter which can monitor the segment (Refer to a paragraph 0077). Then, the task distributor 15 can judge whether or not the selected meter is in a measurable state (Refer to a paragraph 0078), and if it is in a measurable state, the task distributor 15 sets rules to the selected meter and makes the meter execute a measurement (Refer to paragraphs 0086 – 0088).

In cases where a meter exists in the monitoring segment, the task distributor 15 can search for another meter other than the existed meter and the searched another meter can execute a measurement, if the existed meter is incapable of measurement and a number of rules set on the meter is identical to the maximum number of the rules (Refer to a paragraph 0080).

In view of the foregoing, the distinguishing point of the present invention is to select a meter that is capable of automatically performing the requested measurement.

As noted above, Lutz executes measurements at devices predetermined by a user, and therefore, a network device is not automatically selected on the basis of the location of the device in the network or processing capability (According to Lutz, an automation process illustrated in the following figure is designed to be executed by a user). Further, Lutz does not teach or suggest that, if a meter is insufficient to fulfill a predetermined rule, the other meter can be selected.


REQUEST
ONE WAY DELAY FROM TERMINAL A TO TERMINAL B IS 10ms OR LESS
[0074]
SELECTION OF MEASUREMENT DEVICE (AUTOMATION PROCESS)
TWO MEASUREMENT DEVICES ARE REQUIRED FOR MEASUREMENT OF ONE WAY DELAY
[0075]
MONITORING SEGMENT ARE SEGMENT A AND SEGMENT B. METER A OF SEGMENT A AND METER B OF SEGMENT B ARE SELECTED.
[0077]
JUDGING WHETHER OR NOT METER A AND B HAVE MEASUREMENT CAPABILITY FOR TIME SYNCHRONIZATION OR THE LIKE
[0078]
EXECUTION OF MEASUREMENT
MEASUREMENT RULES ARE SET TO METER A AND B
[0088]
TERMINAL A
SEGMENT A
METER A
METER C
METER B
SEGMENT B
TERMINAL B
20
11
30
---▶: TRAFFIC FLOW

Moreover, Garg describes a system that collects information from various measurement points and analyzes the information. However, Garg does not teach or suggest that a network device is automatically selected on the basis of a location of the device in the network or processing capability to execute a specific measurement.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 303-571-4000.

Respectfully submitted,

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